

312E

Hydraulic Excavator



Engine

Engine Model	Cat® C4.4 ACERT™	
Net Power – SAE J1349	68 kW	91 hp
Gross Power – SAE J1995	71 kW	95 hp

Drive

Maximum Travel Speed	5.5 km/h	3.4 mph
Maximum Drawbar Pull	114 kN	25,628 lbf

Weight

Minimum Operating Weight	13 500 kg	29,770 lb
Maximum Operating Weight	15 000 kg	33,080 lb

Introduction

Since its introduction in the 1990s, the 300 Series family of excavators has become the industry standard in general, quarry, and heavy construction applications. The all-new E Series and the 312E will continue that trend-setting standard.

The 312E meets today's U.S. EPA Tier 4 Interim emission standards. It is also built with several new fuel-saving and comfort-enabling features and benefits that will delight owners and operators.

If you are looking for more productivity and comfort, less fuel consumption and emissions, and easier and more sensible serviceability, you will find it in the all-new 312E and the E Series family of excavators.



Contents

Engine	3
Operator Station.....	4
Hydraulics	5
Structures & Undercarriage	6
Front Linkage	7
Work Tools.....	8
Integrated Technologies.....	10
Serviceability	11
Safety	12
Complete Customer Care.....	13
Sustainability	14
Specifications.....	15
Standard Equipment.....	31
Optional Equipment.....	32

Engine

Reduced emissions, economical and reliable performance

Cat® C4.4 ACERT™ Engine

The Cat C4.4 ACERT engine delivers the same level of performance using significantly less fuel than the previous series engine.

Emissions Solution

Equipped to meet U.S. EPA Tier 4 Interim emission standards, the 312E's C4.4 ACERT engine features an aftertreatment regeneration solution that ensures the machine works as normal with no operator intervention needed.

Biodiesel-Ready Fuel System

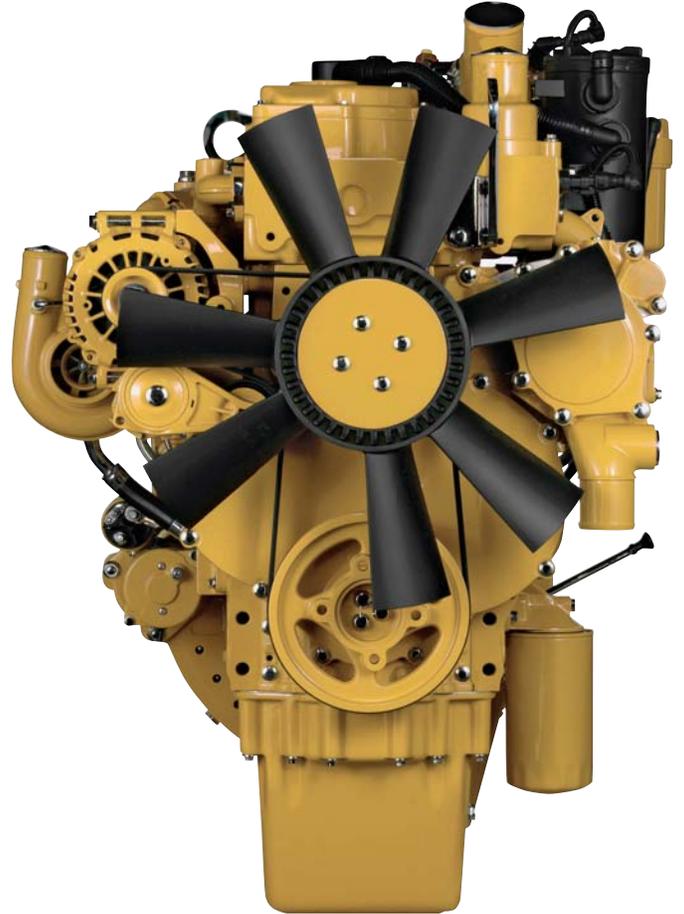
The C4.4 ACERT engine is equipped with an electronic-controlled high-pressure fuel system that includes an electric priming pump and three-layer fuel hoses to allow the use of biodiesel (meeting ASTM 6751 or EN 14214) up to B20 (biodiesel 20% mixture).

Cooling System

The cooling system features an air-to-air aftercooler and A/C condenser that tilt up and swing out of the way for easy servicing.

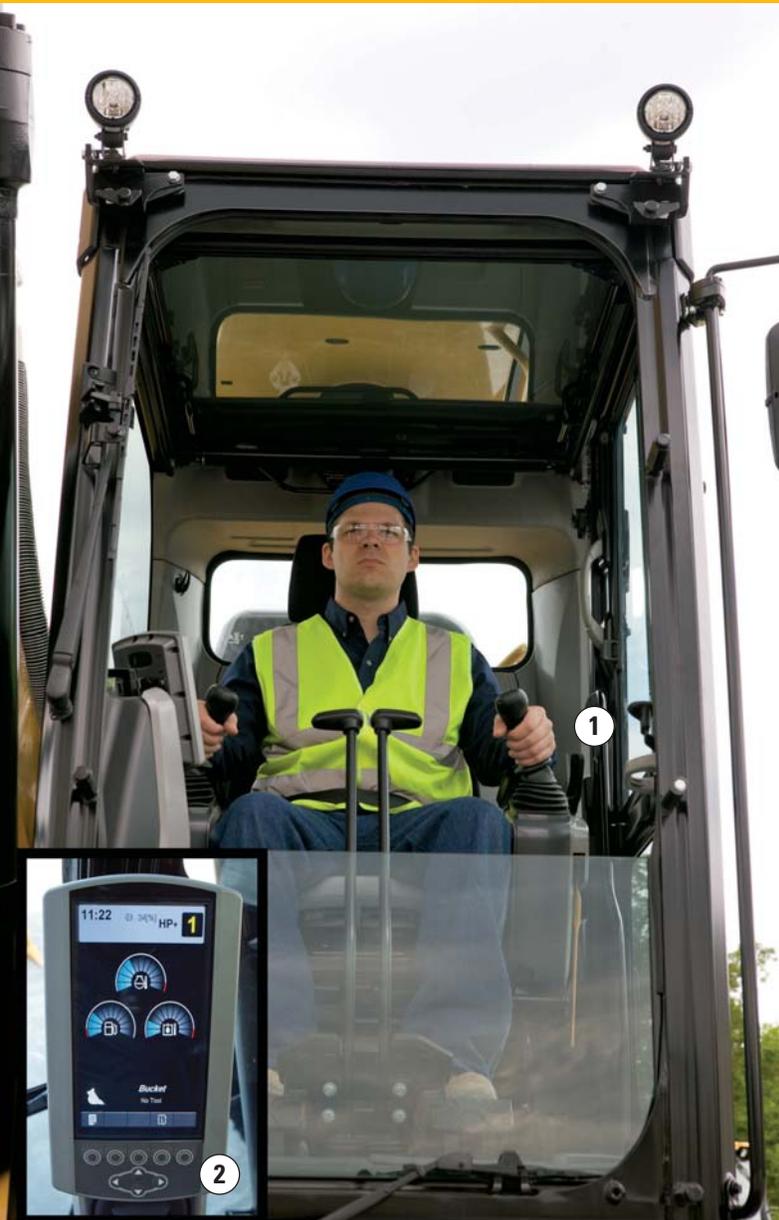
Speed and Power Control

The 312E features speed control to maximize performance while minimizing fuel consumption. Two different power modes are offered: high power mode when you need maximum production; economy mode when you need performance with the lowest fuel consumption. The operator can easily change between modes through the console switch panel to meet the needs for the job at hand – all to help manage and conserve fuel.



Operator Station

Comfort and convenience to keep people productive



Seats

The seat range includes air suspension, heated, and air cooled options. All seats include a reclining back, upper and lower seat slide adjustments, and height and tilt angle adjustments to meet operator needs for comfort and productivity.

Controls

The right and left joystick (1) consoles can be adjusted to meet individual preferences, improving operator comfort and productivity during the course of a day. With the touch of a button, one-touch idle reduces engine speed to help save fuel; touch it again or move the joystick and the machine returns to normal operating level.

Monitor

The 312E is equipped with a 7" LCD (Liquid Crystal Display) monitor (2) that is 40% bigger than the previous model's with higher resolution for better visibility. In addition to an improved keypad and added functionality, it's programmable to provide information in a choice of 44 languages to support today's diverse workforce.

An "Engine Idle Shutdown" setting accessible through the monitor, allows owners and operators to specify how long the machine should idle before shutting down the engine, which can save significant amounts of fuel.

The image of the rearview camera is displayed directly on the monitor, which will help keep you focused on the job at hand.

Power Supply

Two 12-volt power supply sockets are located near key storage areas for charging electronic devices such as an MP3 player and cell phone.

Storage

Storage spaces are located in the front, rear, and side consoles. A dedicated space near the auxiliary power supply holds MP3 players and cell phones. The drink holder accommodates large mugs with handles, and a shelf behind the seat stores large lunch or toolboxes.

Automatic Climate Control

The climate control system features five air outlets with positive filtered ventilation, which makes working in the heat and cold much more pleasant.



Hydraulics

Power to move more dirt, rock, and debris with speed and precision

Main Control Valve and Auxiliary Valves

The 312E uses a high-pressure system to tackle the toughest of work in short order. The machine features a highly efficient and simple main control valve to improve fuel consumption; it also allows for greater tool versatility.

Electric Boom Regeneration System

The 312E regenerates the flow of oil from the head end of the boom cylinder to the rod end of the boom cylinder during a boom down operation to save energy, which helps improve fuel efficiency. It is optimized for any dial speed setting being used by the operator, which results in less pressure loss for higher controllability, more productivity, and lower operating costs.

Structures & Undercarriage

Built to work in rugged environments



Frame

The upper frame includes reinforced mountings to support the Roll-Over Protective Structure (ROPS) cab; the lower frame is reinforced to increase component durability.

Undercarriage

Long undercarriage supports various work applications. The track rollers are a double solid-pin-type design to improve reliability compared to the single solid-pin-type design. A segmented two-piece guiding guard is now offered to help maintain track alignment and improve performance in multiple applications.

Counterweight

Built with an integrated rearview camera housing, the counterweight comes with integrated links to enable easy removal for maintenance or shipping.





Front Linkage

Made for high stress and long service life

Booms and Sticks

The 312E is offered with a reach boom and three stick configurations: R2.5 m (8'2"), R2.8 m (9'2"), and R3.0 m (9'10"). Also, a new thumb-ready stick with factory brackets and structural reinforcement to attach a Cat hydraulic thumb to the machine is an available option. Each boom and stick is built with internal baffle plates for added durability, and each undergoes ultrasound inspection to ensure weld quality and reliability.

Reach configuration balances digging force and bucket capacity. It covers all applications this size of machine was designed to take on such as digging, loading, trenching, and working with hydraulic tools.

Large box-section structures with thick, multi-plate fabrications, castings, and forgings are used in high-stress areas such as the boom nose, boom foot, boom cylinder, and stick foot to improve durability. Also, the front linkage pins' inner bearing surfaces are welded with a self-lubricated bearing used to extend service intervals and increase uptime.

Work Tools

You can dig, hammer, rip, and cut with confidence.



You can extend the versatility and performance of your machine with the full lineup of Cat work tools. Each tool equips your machine to perform many different tasks found at a variety of job sites.

Couplers: Quick Tool Changes

Imagine the productivity you'll achieve with a quick coupler. Combine a robust coupler with a common work tool inventory that can be shared between same size machines and you'll get performance and flexibility on every job. The Cat Center-Lock™ pin grabber coupler features a patented locking system and highly visible lock. You can clearly see when the coupler is engaged or disengaged from the attachment.

Work Tools: Cut, Crush, Pulverize and Load

No matter your specialty, Caterpillar provides tools that are perfectly matched to get the most out of your Cat machine – quickly and efficiently. Field-installed hydraulic kits are uniquely designed to integrate any Cat work tool with your 312E.

Buckets: Dig, Move, Load

Cat buckets are designed to fill efficiently so you notice a fast, smooth cycle, which means high productivity each time you dig. Wear characteristics of general duty, heavy duty, and severe duty buckets give you solid performance in a wide variety of material abrasions. Ditch cleaning and other specialty buckets are available when needed.

GRAB, SORT, LOAD



Pro Series Hydraulic Thumbs



Stiff Link Thumbs



Contractors' Grapples



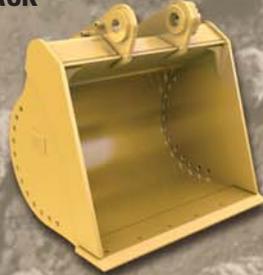
Trash Grapples

SWAP TOOLS



Center-Lock™ Pin Grabber Coupler

DIG & PACK



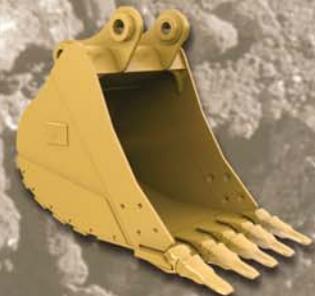
Ditch Cleaning and Tilt Buckets



General Duty Buckets



Heavy Duty Buckets



Severe Duty Buckets



Vibratory Plate Compactors

CUT, CRUSH, BREAK & RIP



Multi-Processors



Scrap & Demolition Shears



Secondary Pulverizers



Hydraulic Hammers



Rippers



Integrated Technologies

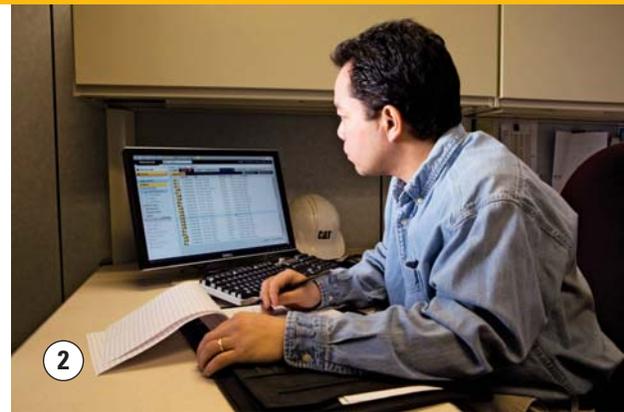
Solutions that make work easier and more efficient

Cat® Grade Control Depth and Slope

This optional system combines traditional machine control and guidance with standard factory-installed and calibrated components, making the system ready to go to work the moment it leaves the factory. The system utilizes internal front linkage sensors – well protected from the harsh working environment – to give operators real-time bucket tip position information through the cab monitor (1), which minimizes the need and cost for traditional grade checking and enhances job site safety. It also helps the operator complete jobs in fewer cycles, which means less fuel use. Cat dealers can upgrade the system to full three-dimensional control by adding proven Cat AccuGrade™ positioning technologies, including GPS and Universal Total Station (UTS).

Cat Product Link

This optional system is deeply integrated into the machine monitoring system and is designed to help customers improve their overall fleet management effectiveness. Events and diagnostic codes as well as hours, fuel consumption, idle time, machine location, and other detailed information are transmitted to a secure web based application (2 and 3) called VisionLink™, which uses powerful tools to communicate to users and dealers.



Serviceability

Fast, easy and safe access built in

Service Doors

Wide service doors feature sturdier hinges and latches and a new screen design to help prevent debris entry; a one-piece hood (1) provides easier access to the engine and cooling compartments.

Compartments

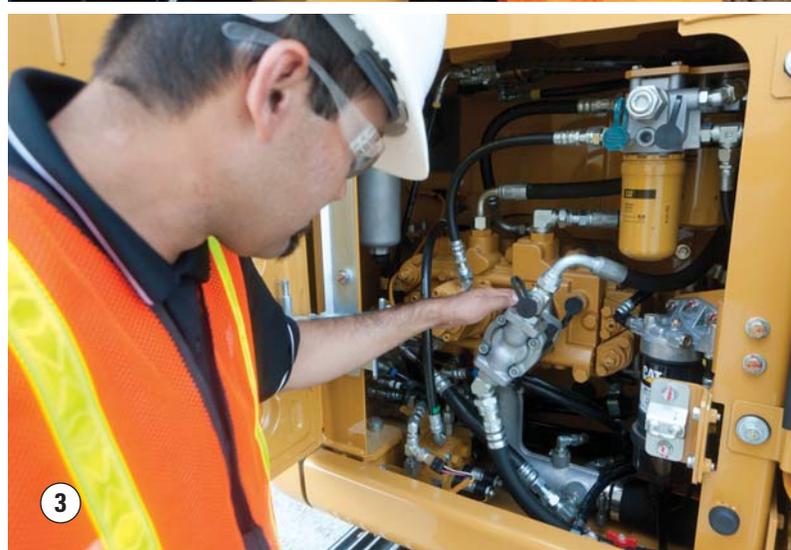
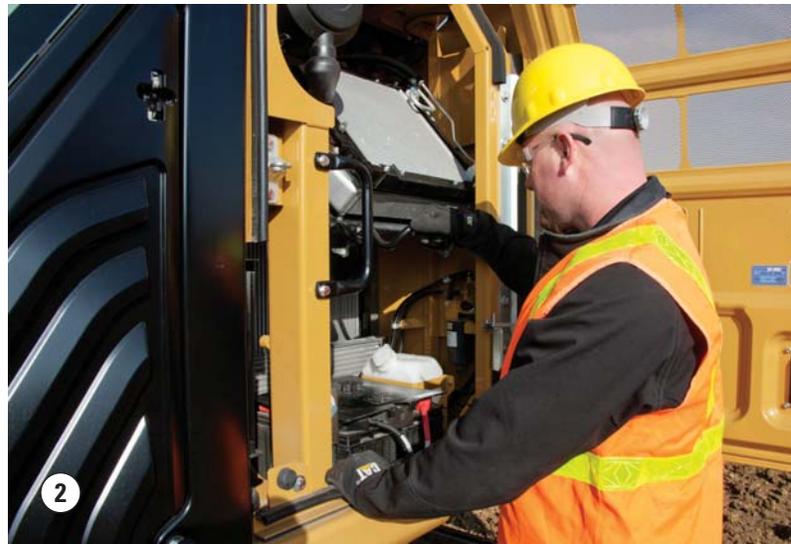
The radiator (2), pump (3), and air cleaner compartments provide easy access to major components. The fresh air filter is located on the side of the cab to make it easy to reach and replace as needed.

Other Service Benefits

The water separator with water level sensor has a primary fuel filter element located in the pump compartment near ground level; the electric priming pump is mounted before the primary filter base and is easy to service compared to a traditional hand-priming pump.

The fuel tank features a remote drain cock located in the pump compartment to make it easy to remove water and sediment during maintenance.

The engine oil check gauge is situated in front of the engine compartment for easy access, and a uniquely designed drain cock helps prevent spills.



Safety

Features to help protect people



ROPS Cab

The ROPS-certified cab (1) allows an Operator Protective Guard to be bolted directly to it.

Sound Proofing

Improved sealing and cab roof lining lower noise levels inside the cab significantly during machine operation.

Anti-Skid Plates

The surface of the upper structure and the top of the storage box area are covered with anti-skid plates to help prevent service personnel and operators from slipping during maintenance.

Steps, Hand and Guard Rails

Steps on the track frame and storage box along with extended hand rail and optional guard rail to the upper deck enable operators to securely work on the machine.

Time Delay Lights

When the light switch is on, cab and boom lights will illuminate to enhance visibility after the engine start key has been turned off.

High Intensity Discharge (HID) Lights

Halogen lights are standard, but they can be upgraded to HID for greater visibility.

Windows

The 70/30 split configuration features an upper window equipped with handles on the top and both sides so the operator can slide it to store in the ceiling. The lower window is removable and can be stored on the left wall of the cab shell. The large skylight provides great overhead visibility, excellent natural lighting, and good ventilation. The skylight can be opened completely to become an emergency exit.

Wiper System

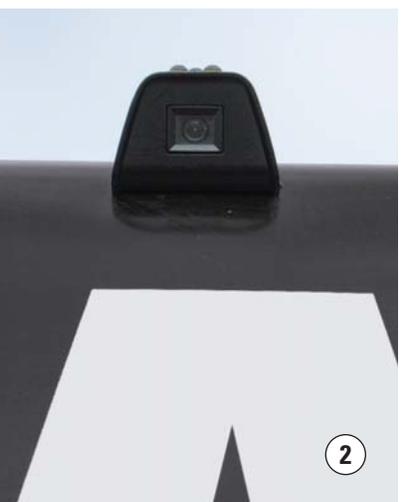
A lower wiper is available as an option to maximize visibility in poor weather conditions. The lower wiper motor is integrated to the upper frame so it doesn't obstruct the forward view.

Monitor Warning System

The machine features a buzzer in the monitor that tells customers when critical events like plugged filters or low hydraulic pressure need to be immediately addressed.

Rearview Camera

An optional rearview camera (2) is housed in the counterweight. The image projects through the cab monitor (3) to give the operator a clear view of what is behind the machine.





Complete Customer Care

Service you can count on

Product Support

Cat dealers utilize a worldwide parts network to maximize your machines' uptime. Plus they can help you save money with Cat remanufactured components.

Machine Selection

What are the job requirements and machine attachments? What production is needed? Your Cat dealer can provide recommendations to help you make the right machine choices.

Purchase

Consider financing options and day-to-day operating costs. Look at dealer services that can be included in the machine's cost to yield lower owning and operating costs over time.

Customer Support Agreements

Cat dealers offer a variety of customer support agreements and work with you to develop a plan to meet your specific needs. These plans can cover the entire machine, including attachments, to help protect your investment.

Operation

Improving operating techniques can boost your profits. Your Cat dealer has videos, literature, and other ideas to help you increase productivity. Caterpillar also offers simulators and certified operator training to help maximize the return on your investment.

Replacement

Repair, rebuild, or replace? Your Cat dealer can help you evaluate the cost involved so you can make the best choice for your business.



Sustainability

Generations ahead in every way

- The C4.4 ACERT engine, along with the Cat Clean Emissions Module (CEM), meets U.S. EPA Tier 4 Interim emission standards.
- Even when operating in high horsepower and high production applications, the 312E performs a similar amount of work while burning less fuel than the previous D Series model. This means more efficiency, less resources consumed, and fewer emissions.
- The 312E has the flexibility of running on either ultra-low-sulfur diesel (ULSD) fuel with 15 ppm of sulfur or less or biodiesel (B20) fuel blended with ULSD that meets ASTM 6751 or EN 14214 standards.
- An overfill indicator rises when the fuel tank is full to help service technicians avoid spilling.
- The QuickEvac™ option ensures fast, easy, and secure changing of engine and hydraulic oil.
- The 312E is built to be rebuilt with major structures and components capable of being remanufactured to reduce waste and replacement costs.
- An efficient engine oil filter eliminates the need for painted metal cans and aluminum top plates. The cartridge-style spin-on housing enables the internal filter to be separated and replaced; the used internal element can be incinerated to help reduce waste.
- The 312E is an efficient, productive machine that's designed to conserve our natural resources for generations ahead.

312E Hydraulic Excavator Specifications

Engine

Engine Model	Cat® C4.4 ACERT™	
Net Power – SAE J1349	68 kW	91 hp
Gross Power – SAE J1995	71 kW	95 hp
Bore	105 mm	4.13 in
Stroke	127 mm	5.00 in
Displacement	4.4 L	269 in ³

Weights

Minimum Operating Weight*	13 500 kg	29,770 lb
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Maximum Operating Weight**	15 000 kg	33,080 lb
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*4.65 m (15'3") boom, 2.5 m (8'10") stick, 2.2 mt (2.4 t) counterweight, 0.65 m³ (0.84 yd³) bucket, and 500 mm (20") shoes.
 **4.65 m (15'3") boom, 3.0 m (9'10") stick, 2.2 mt (2.4 t) counterweight, 0.65 m³ (0.84 yd³) bucket, 770 mm (30") shoes with blade.

Hydraulic System

Main System – Maximum Flow (Total)	254 L/min	67 gal/min
Swing System – Maximum Flow	127 L/min	34 gal/min
Maximum Pressure – Equipment	30 500 kPa	4,424 psi
Maximum Pressure – Travel	35 000 kPa	5,076 psi
Maximum Pressure – Swing	23 000 kPa	3,336 psi
Pilot System – Maximum Flow	21.9 L/min	5.8 gal/min
Pilot System – Maximum Pressure	4120 kPa	598 psi
Boom Cylinder – Bore	110 mm	4 in
Boom Cylinder – Stroke	1015 mm	40 in
Stick Cylinder – Bore	120 mm	5 in
Stick Cylinder – Stroke	1197 mm	47 in
Bucket Cylinder – Bore	100 mm	4 in
Bucket Cylinder – Stroke	939 mm	37 in

Drive

Maximum Travel Speed	5.5 km/h	3.4 mph
Maximum Drawbar Pull	114 kN	25,628 lbf

Swing Mechanism

Swing Speed	11.5 rpm
Swing Torque	30.9 kN·m 22,791 lb ft

Service Refill Capacities

Fuel Tank Capacity	250 L	66.04 gal
Cooling System	22 L	5.81 gal
Engine Oil (with filter)	13.5 L	3.57 gal
Swing Drive	2.4 L	0.63 gal
Final Drive (each)	3 L	0.79 gal
Hydraulic System (including tank)	164 L	43.32 gal
Hydraulic Tank	90.6 L	23.93 gal

Track

Number of Shoes (each side)	
Long Undercarriage	46 pieces
Number of Track Rollers (each side)	
Long Undercarriage	7 pieces
Number of Carrier Rollers (each side)	
Long Undercarriage	2 pieces

Sound Performance

Operator Noise (Closed) – ISO 6396	69 dB(A)
Spectator Noise – ISO 6395	100 dB(A)

- When properly installed and maintained, the cab offered by Caterpillar, when tested with doors and windows closed according to ANSI/SAE J1166 OCT98, meets OSHA and MSHA requirements for operator sound exposure limits in effect at time of manufacture.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in noisy environment.

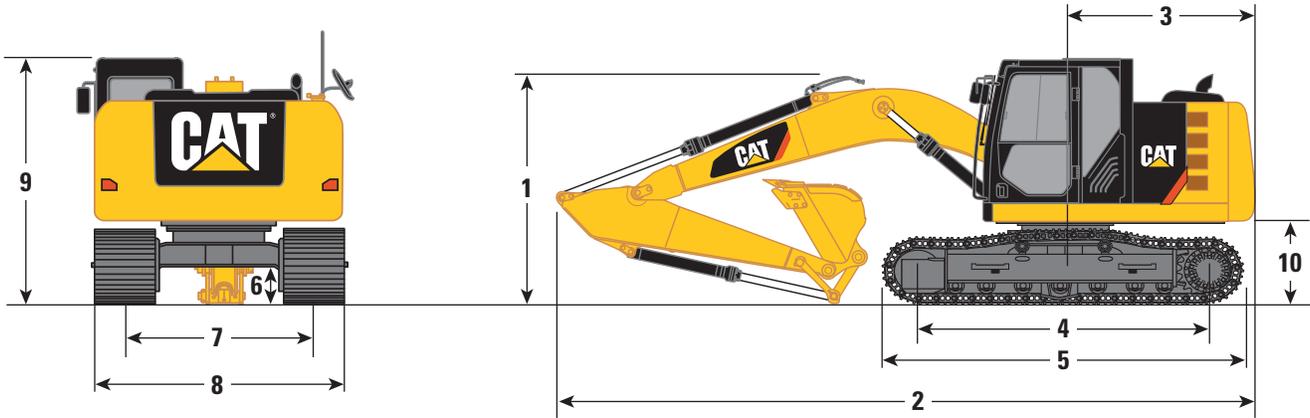
Standards

Brakes	ISO 10265 2008
ROPS Cab	ISO 12117-2
Cab/OPG	ISO 10262 1998

312E Hydraulic Excavator Specifications

Dimensions

All dimensions are approximate.



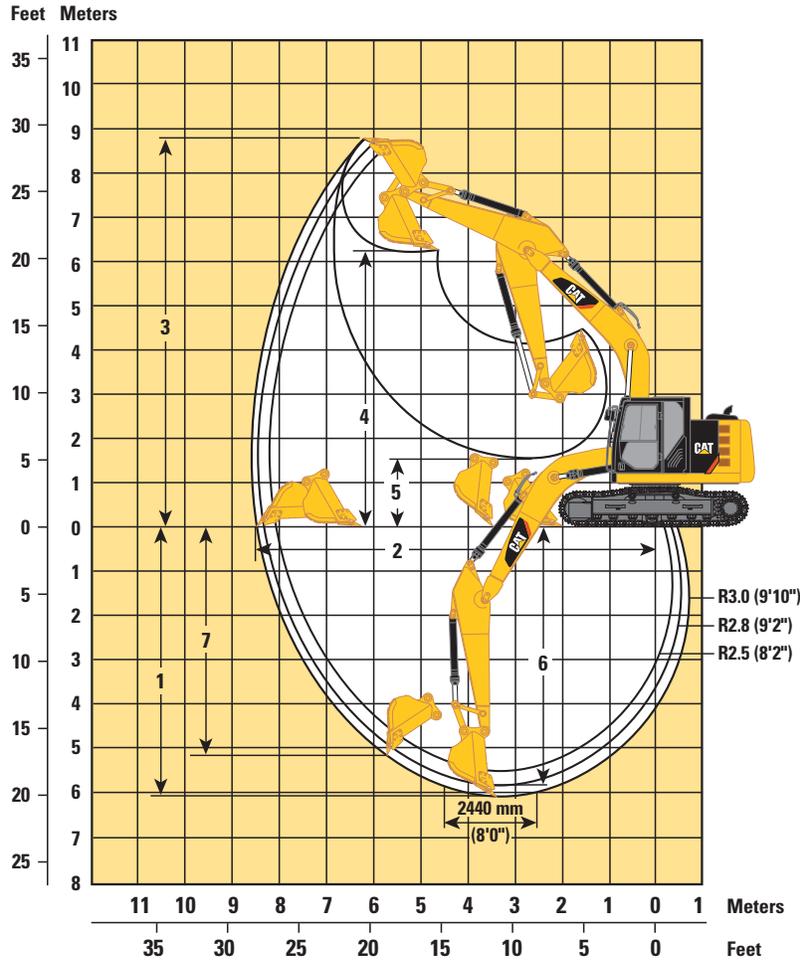
Stick	Reach Boom 4.65 m (15'3")		
	R3.0 (9'10")	R2.8 (9'2")	R2.5 (8'2")
	mm (ft)	mm (ft)	mm (ft)
1 Shipping Height*	2980 (9'9")	2980 (9'9")	2980 (9'9")
Shipping Height at Boom Top	2830 (9'3")	2970 (9'9")	2830 (9'3")
Shipping Height with Guard Rail	2980 (9'9")	2980 (9'9")	2980 (9'9")
Shipping Height with Top Guard	2970 (9'9")	2970 (9'9")	2970 (9'9")
2 Shipping Length			
Long Undercarriage	7670 (25'2")	7650 (25'1")	7670 (25'2")
Long Undercarriage with Blade	7960 (26'1")	7920 (26'0")	7950 (26'1")
3 Tail Swing Radius	2160 (7'1")	2160 (7'1")	2160 (7'1")
4 Length to Center of Rollers			
Long Undercarriage	3040 (10'0")	3040 (10'0")	3040 (10'0")
5 Track Length			
Long Undercarriage	3750 (12'4")	3750 (12'4")	3750 (12'4")
6 Ground Clearance	440 (1'5")	440 (1'5")	440 (1'5")
7 Track Gauge	1990 (6'6")	1990 (6'6")	1990 (6'6")
8 Transport Width			
500 mm (20") Shoes	2490 (8'2")	2490 (8'2")	2490 (8'2")
600 mm (24") Shoes	2590 (8'6")	2590 (8'6")	2590 (8'6")
700 mm (28") Shoes	2690 (8'10")	2690 (8'10")	2690 (8'10")
770 mm (30") Shoes	2760 (9'1")	2760 (9'1")	2760 (9'1")
9 Cab Height	2770 (9'1")	2770 (9'1")	2770 (9'1")
Cab Height with Top Guard	2970 (9'9")	2970 (9'9")	2970 (9'9")
10 Counterweight Clearance**	890 (2'11")	890 (2'11")	890 (2'11")

*Including shoe lug height.

**Without shoe lug height.

Working Ranges

All dimensions are approximate.



Stick	Reach Boom 4.65 m (15'3")		
	R3.0 (9'10")	R2.8 (9'2")	R2.5 (8'2")
	mm (ft)	mm (ft)	mm (ft)
1 Maximum Digging Depth	6040 (19'10")	5840 (19'2")	5540 (18'2")
2 Maximum Reach at Ground Level	8620 (28'3")	8430 (27'8")	8170 (26'10")
3 Maximum Cutting Height	8710 (28'7")	8590 (28'2")	8490 (27'10")
4 Maximum Loading Height	6330 (20'9")	6210 (20'4")	6100 (20'0")
5 Minimum Loading Height	1530 (5'0")	1730 (5'8")	2020 (6'8")
6 Maximum Depth Cut for 2440 mm (8'0") Level Bottom	5860 (19'3")	5650 (18'6")	5330 (17'6")
7 Maximum Vertical Wall Digging Depth	5200 (17'1")	5070 (16'8")	4840 (15'11")

312E Hydraulic Excavator Specifications

Operating Weight and Ground Pressure

Long Undercarriage without Blade

	770 mm (30") Triple Grouser Shoes		700 mm (28") Triple Grouser Shoes		600 mm (24") Triple Grouser Shoes		500 mm (20") Triple Grouser Shoes	
	kg (lb)	kPa (psi)						
	Reach Boom – 4.65 m (15'3")							
R3.0 (9'10")	14 200 (31,310)	27.5 (3.98)	14 100 (31,090)	30.0 (4.35)	13 800 (30,430)	34.2 (4.97)	13 500 (29,770)	40.2 (5.83)
R2.8 (9'2")	14 200 (31,310)	27.5 (3.98)	14 000 (30,870)	29.8 (4.32)	13 800 (30,430)	34.2 (4.97)	13 500 (29,770)	40.2 (5.83)
R2.5 (8'2")	14 100 (31,090)	27.3 (3.97)	14 000 (30,870)	29.8 (4.32)	13 700 (30,210)	34.1 (4.94)	13 500 (29,770)	40.2 (5.83)

Long Undercarriage with Blade

Reach Boom – 4.65 m (15'3")								
R3.0 (9'10")	15 000 (33,080)	29.0 (4.21)	14 900 (32,850)	31.7 (4.60)	14 600 (32,190)	36.2 (5.26)	14 400 (31,750)	42.9 (6.22)
R2.8 (9'2")	15 000 (33,080)	29.0 (4.21)	14 900 (32,850)	31.7 (4.60)	14 600 (32,190)	36.2 (5.26)	14 300 (31,530)	42.6 (6.18)
R2.5 (8'2")	14 900 (32,850)	28.9 (4.20)	14 800 (32,630)	31.5 (4.57)	14 500 (31,970)	36.0 (5.22)	14 300 (31,530)	42.6 (6.18)

All weights are rounded up to nearest 100 kg and lb including General Duty 0.65 m³ (0.84 yd³) bucket (470 kg/1,040 lb).

Major Component Weights

	kg	lb
Base Machine (with boom cylinder, without counterweight, front linkage and track)	5120	11,290
Long Undercarriage	2600	5,730
Counterweight 2.2 mt (2.4 t)	2200	4,850
Boom (includes lines, pins and stick cylinder)		
Reach Boom – 4.65 m (15'3")	1010	2,230
Stick (includes lines, pins, bucket cylinder, and bucket linkage)		
R3.0 (9'10")	560	1,230
R2.8 (9'2")	530	1,170
R2.5 (8'2")	480	1,060
R3.0 (9'10") for Thumb	610	1,350
Track Shoe (Long/per two tracks)		
500 mm (20") Triple Grouser	1560	3,440
600 mm (24") Triple Grouser	1820	4,010
700 mm (28") Triple Grouser	2100	4,630
770 mm (30") Triple Grouser	2240	4,940
Blade		
2500 mm (8'2")	810	1,790
2600 mm (8'6")	810	1,790
2700 mm (8'10")	820	1,810

All weights are rounded up to nearest 10 kg and lb except for buckets. Kg and lb were rounded up separately so some of the kg and lb do not match.

Base machine includes 75 kg (165 lb) operator weight, 90% fuel weight, and undercarriage with center guard.

Bucket and Stick Forces

Stick	Reach Boom 4.65 m (15'3")		
	R3.0 (9'10")	R2.8 (9'2")	R2.5 (8'2")
	kN (lbf)	kN (lbf)	kN (lbf)
General Duty Bucket			
Bucket Digging Force (SAE)	85 (19,200)	85 (19,200)	85 (19,200)
Stick Digging Force (SAE)	57 (12,800)	60 (13,500)	64 (14,300)
Severe Duty Bucket			
Bucket Digging Force (SAE)	84 (18,800)	83 (18,700)	83 (18,700)
Stick Digging Force (SAE)	57 (12,800)	60 (13,400)	63 (14,200)

312E Hydraulic Excavator Specifications

Reach Boom Lift Capacities



Load Point Height



Load at Maximum Reach



Load Radius Over Front



Load Radius Over Side

Boom – 4.65 m (15'3")

Counterweight – 2.2 mt (2.4 t)

Bucket – None

Stick – R3.0 (9'10")

Shoes – 700 mm (28") triple grouser with step

	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				m ft	
	kg lb	kg lb	kg lb	kg lb	kg lb	kg lb	kg lb	kg lb	kg lb	kg lb	kg lb	kg lb		
7.5 m 25.0 ft												*2550	*2550	4.37
6.0 m 20.0 ft												*2100	*2100	5.95
4.5 m 15.0 ft							*3150	2550				*2000	*2000	6.86
3.0 m 10.0 ft							*6,900	5,500				*4,350	*4,350	22.39
					*3900	3850	*3450	2500				*2000	1800	7.35
					*8,400	8,300	*7,550	5,350				*4,350	3,950	24.09
1.5 m 5.0 ft			*7600	6550	*4950	3600	3700	2400	*2150	1700		*2050	1700	7.52
			*16,250	14,050	*10,650	7,750	8,000	5,100				*4,550	3,750	24.67
Ground Line			*7850	6100	5550	3400	3600	2300				*2300	1700	7.38
			*18,150	13,100	11,950	7,300	7,750	4,900				*5,000	3,750	24.20
-1.5 m -5.0 ft	kg lb	*4500 *10,050	*4500 *10,050	*9350 *20,250	6000 12,850	5450 11,700	3300 7,100	3550 7,650	2250 4,800			*2700 *5,900	1850 4,100	6.91 22.63
-3.0 m -10.0 ft	kg lb	*7500 *16,850	*7500 *16,850	*8550 *18,500	6050 12,950	5450 11,700	3300 7,100	3600 7,750	2250			3550 7,900	2250 4,950	6.04 19.69
-4.5 m -15.0 ft	kg lb			*6450 *13,700	6250 13,400	*4050	3450					*4000 *8,800	3400 7,750	4.53 14.54

Boom – 4.65 m (15'3")

Counterweight – 2.2 mt (2.4 t)

Bucket – None

Stick – R2.8 (9'2")

Shoes – 700 mm (28") triple grouser with step

	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft				m ft			
	kg lb	kg lb	kg lb	kg lb	kg lb	kg lb	kg lb	kg lb	kg lb	kg lb				
6.0 m 20.0 ft									*2300	*2300	5.70			
									*5,100	*5,100	18.45			
4.5 m 15.0 ft					*3250	*3250	*3300	2550	*2150	2150	6.65			
					*7,150	*7,150	*7,250	5,500	*4,750	*4,750	21.70			
3.0 m 10.0 ft			*5250	*5250	*4050	3850	*3600	2500	*2150	1900	7.16			
			*11,200	*11,200	*8,800	8,250	*7,800	5,350	*4,700	4,150	23.45			
1.5 m 5.0 ft			*7950	6500	*5100	3600	3700	2400	*2250	1800	7.33			
			*17,050	13,950	*11,000	7,700	8,000	5,100	*4,950	3,900	24.04			
Ground Line			*7500	6100	5550	3400	3600	2300	*2500	1800	7.18			
			*17,350	13,100	11,950	7,300	7,800	4,950	*5,450	3,950	23.57			
-1.5 m -5.0 ft	kg lb	*4700 *10,450	*4700 *10,450	*9350 *20,200	6000 12,900	5450 11,700	3300 7,100	3550 7,700	2250 4,850			*2950 *6,550	1950 4,300	6.70 21.95
-3.0 m -10.0 ft	kg lb	*8000 *18,000	*8000 *18,000	*8400 *18,150	6100 13,050	5500 11,750	3350 7,150					3800 8,400	2400 5,300	5.80 18.90
-4.5 m -15.0 ft	kg lb			*6050	*6050							*4100 *10,000	3850 9,650	4.18 12.52

*Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

Reach Boom Lift Capacities



Load Point Height



Load at Maximum Reach



Load Radius Over Front



Load Radius Over Side

Boom – 4.65 m (15'3")

Counterweight – 2.2 mt (2.4 t)

Bucket – None

Stick – R2.5 (8'2")

Shoes – 700 mm (28") triple grouser with step

	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft				m ft	
												
6.0 m 20.0 ft	kg lb				*3350 *7,450	*3350 *7,450			*2450 *5,400	*2450 *5,400	5.37 17.35	
4.5 m 15.0 ft	kg lb				*3550 *7,750	*3550 *7,750	*3550 *7,100	2550 5,450	*2250 *4,950	*2250 *4,950	6.37 20.77	
3.0 m 10.0 ft	kg lb			*5850 *12,500	*5850 *12,500	*4350 *9,400	3800 8,200	*3750 8,200	2500 5,350	*2250 4,400	6.90 22.60	
1.5 m 5.0 ft	kg lb			*8450 *18,150	6400 13,800	*5350 *11,500	3600 7,700	3750 8,000	2400 5,150	*2350 *5,100	1900 4,150	7.08 23.22
Ground Line	kg lb			*6900 *15,950	6100 13,150	5550 11,950	3400 7,350	3650 7,800	2300 4,950	*2600 *5,650	1900 4,200	6.93 22.72
-1.5 m -5.0 ft	kg lb	*4900 *10,900	*4900 *10,900	*9250 *20,000	6100 13,050	5500 11,800	3350 7,200	3600 7,750	2300 4,900	*3100 *6,800	2100 4,600	6.42 21.04
-3.0 m -10.0 ft	kg lb	*8750 *19,750	*8750 *19,750	*8100 *17,450	6150 13,250	*5500 *11,850	3400 7,300			4150 *9,250	2650 5,850	5.47 17.83

Boom – 4.65 m (15'3")

Counterweight – 2.2 mt (2.4 t)

Bucket – None

Stick – R3.0 (9'10")

Shoes – 600 mm (24") triple grouser

	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				m ft	
														
7.5 m 25.0 ft	kg lb											*2550 *2550	4.37	
6.0 m 20.0 ft	kg lb											*2100 *4,650	*2100 *4,650	5.95 19.26
4.5 m 15.0 ft	kg lb							*3150 *6,900	2550 5,400			*2000 *4,350	*2000 *4,350	6.86 22.39
3.0 m 10.0 ft	kg lb					*3900 *8,400	3800 8,150	*3450 *7,550	2450 5,250			*2000 *4,350	1750 3,900	7.35 24.09
1.5 m 5.0 ft	kg lb			*7600 *16,250	6450 13,850	*4950 *10,650	3550 7,600	3650 7,850	2350 5,000	*2150	1700	*2050 *4,550	1650 3,650	7.52 24.67
Ground Line	kg lb			*7850 *18,150	6000 12,850	5450 11,700	3350 7,150	3550 7,600	2250 4,800			*2300 *5,000	1700 3,700	7.38 24.20
-1.5 m -5.0 ft	kg lb	*4500 *10,050	*4500 *10,050	*9350 *20,250	5850 12,600	5350 11,450	3250 6,950	3500 7,500	2200 4,700			*2700 *5,900	1800 4,000	6.91 22.63
-3.0 m -10.0 ft	kg lb	*7500 *16,850	*7500 *16,850	*8550 *18,500	5900 12,700	5350 11,450	3250 6,950	3500	2200			3500 7,750	2200 4,850	6.04 19.69
-4.5 m -15.0 ft	kg lb			*6450 *13,700	6100 13,150	*4050	3400					*4000 *8,800	3350 7,600	4.53 14.54

*Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

312E Hydraulic Excavator Specifications

Reach Boom Lift Capacities



Load Point Height



Load at Maximum Reach



Load Radius Over Front



Load Radius Over Side

Boom – 4.65 m (15'3")

Counterweight – 2.2 mt (2.4 t)

Bucket – None

Stick – R2.8 (9'2")

Shoes – 600 mm (24") triple grouser

 6.0 m 20.0 ft kg lb	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		 m ft			
	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	m ft	
										*2300 *5,100	*2300 *5,100	5.70 18.45
4.5 m 15.0 ft					*3250 *7,150	*3250 *7,150	*3300 *7,250	2500 5,400	*2150 *4,750	2100 4,700		6.65 21.70
3.0 m 10.0 ft			*5250 *11,200	*5250 *11,200	*4050 *8,800	3750 8,100	*3600 *7,800	2450 5,250	*2150 *4,700	1850 4,050		7.16 23.45
1.5 m 5.0 ft			*7950 *17,050	6400 13,700	*5100 *11,000	3550 7,600	3650 7,850	2350 5,050	*2250 *4,950	1750 3,800		7.33 24.04
Ground Line			*7500 *17,350	6000 12,850	5450 11,700	3350 7,200	3550 7,650	2250 4,850	*2500 *5,450	1750 3,850		7.18 23.57
-1.5 m -5.0 ft	*4700 *10,450	*4700 *10,450	*9350 *20,200	5900 12,650	5350 11,500	3250 7,000	3500 7,550	2200 4,750	*2950 *6,550	1900 4,200		6.70 21.95
-3.0 m -10.0 ft	*8000 *18,000	*8000 *18,000	*8400 *18,150	5950 12,800	5400 11,550	3250 7,050			3700 8,250	2350 5,200		5.80 18.90
-4.5 m -15.0 ft			*6050 *6050						*4100 *10,000	3800 9,500		4.18 12.52

Boom – 4.65 m (15'3")

Counterweight – 2.2 mt (2.4 t)

Bucket – None

Stick – R2.5 (8'2")

Shoes – 600 mm (24") triple grouser

 6.0 m 20.0 ft kg lb	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		 m ft			
	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	m ft	
					*3350 *7,450	*3350 *7,450			*2450 *5,400	*2450 *5,400		5.37 17.35
4.5 m 15.0 ft					*3550 *7,750	*3550 *7,750	*3550 *7,100	2500 5,350	*2250 *4,950	*2250 *4,950		6.37 20.77
3.0 m 10.0 ft			*5850 *12,500	*5850 *12,500	*4350 *9,400	3750 8,050	3750 8,050	2450 5,250	*2250 *4,900	1950 4,300		6.90 22.60
1.5 m 5.0 ft			*8450 *18,150	6300 13,550	*5350 *11,500	3500 7,550	3650 7,850	2350 5,050	*2350 *5,100	1850 4,050		7.08 23.22
Ground Line			*6900 *15,950	6000 12,900	5450 11,750	3350 7,200	3550 7,650	2250 4,900	*2600 *5,650	1850 4,100		6.93 22.72
-1.5 m -5.0 ft	*4900 *10,900	*4900 *10,900	*9250 *20,000	5950 12,800	5400 11,600	3300 7,050	3550 7,600	2250 4,800	*3100 *6,800	2050 4,550		6.42 21.04
-3.0 m -10.0 ft	*8750 *19,750	*8750 *19,750	*8100 *17,450	6050 13,000	5450 11,650	3300 7,150			4100 9,100	2600 5,700		5.47 17.83

*Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

Reach Boom Lift Capacities



Load Point Height



Load at Maximum Reach



Load Radius Over Front



Load Radius Over Side

Boom – 4.65 m (15'3")

Counterweight – 2.2 mt (2.4 t)

Bucket – None

Stick – R3.0 (9'10")

Shoes – 500 mm (20") triple grouser

	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				m ft
													
7.5 m 25.0 ft	kg lb											*2550 *2550	4.37
6.0 m 20.0 ft	kg lb											*2100 *4,650	5.95 19.26
4.5 m 15.0 ft	kg lb							*3150 *6,900	2500 5,350			*2000 *4,350	6.86 22.39
3.0 m 10.0 ft	kg lb					*3900 *8,400	3750 8,050	*3450 *7,550	2400 5,150			*2000 *4,350	7.35 24.09
1.5 m 5.0 ft	kg lb			*7600 *16,250	6350 13,600	*4950 *10,650	3500 7,500	3600 7,700	2300 4,950	*2150 1650		*2050 *4,550	7.52 24.67
Ground Line	kg lb			*7850 *18,150	5900 12,650	5350 11,500	3300 7,050	3500 7,450	2200 4,750			*2300 *5,000	7.38 24.20
-1.5 m -5.0 ft	kg lb	*4500 *10,050	*4500 *10,050	*9350 *20,250	5750 12,350	5250 11,250	3200 6,800	3400 7,350	2150 4,600			*2700 *5,900	6.91 22.63
-3.0 m -10.0 ft	kg lb	*7500 *16,850	*7500 *16,850	*8550 *18,500	5800 12,500	5250 11,250	3200 6,850	3450 6,850	2200			3400 7,600	6.04 19.69
-4.5 m -15.0 ft	kg lb			*6450 *13,700	6000 12,950	*4050	3300					*4000 *8,800	4.53 14.54

Boom – 4.65 m (15'3")

Counterweight – 2.2 mt (2.4 t)

Bucket – None

Stick – R2.8 (9'2")

Shoes – 500 mm (20") triple grouser

	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft				m ft	
												
6.0 m 20.0 ft	kg lb									*2300 *5,100	*2300 *5,100	5.70 18.45
4.5 m 15.0 ft	kg lb					*3250 *7,150	*3250 *7,150	*3300 *7,250	2500 5,300	*2150 *4,750	2100 4,600	6.65 21.70
3.0 m 10.0 ft	kg lb			*5250 *11,200	*5250 *11,200	*4050 *8,800	3700 8,000	*3600 *7,800	2400 5,150	*2150 *4,700	1800 4,000	7.16 23.45
1.5 m 5.0 ft	kg lb			*7950 *17,050	6250 13,500	*5100 *11,000	3450 7,450	3600 7,700	2300 4,950	*2250 *4,950	1700 3,750	7.33 24.04
Ground Line	kg lb			*7500 *17,350	5900 12,650	5350 11,500	3300 7,050	3500 7,500	2200 4,750	*2500 *5,450	1750 3,800	7.18 23.57
-1.5 m -5.0 ft	kg lb	*4700 *10,450	*4700 *10,450	*9350 *20,200	5800 12,450	5250 11,300	3200 6,850	3450 7,400	2150 4,650	2950 6,500	1900 4,150	6.70 21.95
-3.0 m -10.0 ft	kg lb	*8000 *18,000	*8000 *18,000	*8400 *18,150	5850 12,600	5300 11,350	3200 6,900			3650 8,100	2300 5,100	5.80 18.90
-4.5 m -15.0 ft	kg lb			*6050	*6050					*4100 *10,000	3750 9,350	4.18 12.52

*Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

312E Hydraulic Excavator Specifications

Reach Boom Lift Capacities



Load Point Height



Load at Maximum Reach



Load Radius Over Front



Load Radius Over Side

Boom – 4.65 m (15'3")

Counterweight – 2.2 mt (2.4 t)

Bucket – None

Stick – R2.5 (8'2")

Shoes – 500 mm (20") triple grouser

	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft				m ft	
												
6.0 m 20.0 ft	kg lb				*3350 *7,450	*3350 *7,450			*2450 *5,400	*2450 *5,400	5.37 17.35	
4.5 m 15.0 ft	kg lb				*3550 *7,750	*3550 *7,750	*3550 *7,100	2450 5,250	*2250 *4,950	2250 4,950	6.37 20.77	
3.0 m 10.0 ft	kg lb			*5850 *12,500	*5850 *12,500	*4350 *9,400	3700 7,950	3700 7,950	2400 5,150	*2250 *4,900	1950 4,250	6.90 22.60
1.5 m 5.0 ft	kg lb			*8450 *18,150	6200 13,350	*5350 *11,500	3450 7,450	3600 7,700	2300 4,950	*2350 *5,100	1800 4,000	7.08 23.22
Ground Line	kg lb			*6900 *15,950	5900 12,700	5400 11,550	3300 7,100	3500 7,550	2250 4,800	*2600 *5,650	1850 4,050	6.93 22.72
-1.5 m -5.0 ft	kg lb	*4900 *10,900	*4900 *10,900	*9250 *20,000	5850 12,600	5300 11,350	3250 6,950	3500 7,450	2200 4,750	*3100 *6,800	2000 4,450	6.42 21.04
-3.0 m -10.0 ft	kg lb	*8750 *19,750	*8750 *19,750	*8100 *17,450	5950 12,800	5350 11,450	3250 7,050			4000 8,900	2550 5,600	5.47 17.83

Boom – 4.65 m (15'3")

Counterweight – 2.2 mt (2.4 t)

Bucket – None

Stick – R3.0 (9'10")

Shoes – 700 mm (28") triple grouser – Blade Down

	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				m ft	
														
7.5 m 25.0 ft	kg lb											*2550 *2550	4.37	
6.0 m 20.0 ft	kg lb											*2100 *4,650	*2100 *4,650	5.95 19.26
4.5 m 15.0 ft	kg lb							*3150 *6,900	3050 6,500			*2000 *4,350	*2000 *4,350	6.86 22.39
3.0 m 10.0 ft	kg lb					*3900 *8,400	*3900 *8,400	*3450 *7,550	2950 6,350			*2000 *4,350	*2000 *4,350	7.35 24.09
1.5 m 5.0 ft	kg lb			*7600 *16,250	*7600 *16,250	*4950 *10,650	4300 9,250	*3950 *8,500	2850 6,100	*2150 2050		*2050 *4,550	2050 4,450	7.52 24.67
Ground Line	kg lb			*7850 *18,150	7550 16,150	*5750 *12,500	4100 8,800	*4350 *9,400	2750 5,900			*2300 *5,000	2050 4,500	7.38 24.20
-1.5 m -5.0 ft	kg lb	*4500 *10,050	*4500 *10,050	*9350 *20,250	7400 15,850	*6100 *13,200	4000 8,550	*4500 *9,700	2700 5,750			*2700 *5,900	2250 4,900	6.91 22.63
-3.0 m -10.0 ft	kg lb	*7500 *16,850	*7500 *16,850	*8550 *18,500	7450 15,950	*5750 *12,450	4000 8,550	*3950 8,550	2700			*3600 *7,950	2700 5,950	6.04 19.69
-4.5 m -15.0 ft	kg lb			*6450 *13,700	*6450 *13,700	*4050 *4050						*4000 *8,800	*4000 *8,800	4.53 14.54

*Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

Reach Boom Lift Capacities



Load Point Height



Load at Maximum Reach



Load Radius Over Front



Load Radius Over Side

Boom – 4.65 m (15'3")

Counterweight – 2.2 mt (2.4 t)

Bucket – None

Stick – R2.8 (9'2")

Shoes – 700 mm (28") triple grouser – Blade Down

 6.0 m 20.0 ft kg lb	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		 m ft			
	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	m ft	
										*2300 *5,100	*2300 *5,100	5.70 18.45
4.5 m 15.0 ft					*3250 *7,150	*3250 *7,150	*3300 *7,250	3000 6,450		*2150 *4,750	*2150 *4,750	6.65 21.70
3.0 m 10.0 ft			*5250 *11,200	*5250 *11,200	*4050 *8,800	*4050 *8,800	*3600 *7,800	2950 6,300		*2150 *4,700	*2150 *4,700	7.16 23.45
1.5 m 5.0 ft			*7950 *17,050	*7950 *17,050	*5100 *11,000	4300 9,200	*4050 *8,750	2850 6,100		*2250 *4,950	2100 4,650	7.33 24.04
Ground Line			*7500 *17,350	*7500 *16,150	*5900 *12,700	4100 8,800	*4400 *9,550	2750 5,900		*2500 *5,450	2150 4,700	7.18 23.57
-1.5 m -5.0 ft	*4700 *10,450	*4700 *10,450	*9350 *20,200	7450 15,950	*6150 *13,250	4000 8,600	*4500 *9,700	2700 5,800		*2950 *6,550	2350 5,150	6.70 21.95
-3.0 m -10.0 ft	*8000 *18,000	*8000 *18,000	*8400 *18,150	7500 16,100	*5700 *12,250	4000 8,650				*4050 *9,000	2850 6,350	5.80 18.90
-4.5 m -15.0 ft			*6050 *6050	*6050 *6050						*4100 *10,000	*4100 *10,000	4.18 12.52

Boom – 4.65 m (15'3")

Counterweight – 2.2 mt (2.4 t)

Bucket – None

Stick – R2.5 (8'2")

Shoes – 700 mm (28") triple grouser – Blade Down

 6.0 m 20.0 ft kg lb	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		 m ft			
	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	 kg lb	m ft	
					*3350 *7,450	*3350 *7,450				*2450 *5,400	*2450 *5,400	5.37 17.35
4.5 m 15.0 ft					*3550 *7,750	*3550 *7,750	*3550 *7,100	3000 6,450		*2250 *4,950	*2250 *4,950	6.37 20.77
3.0 m 10.0 ft			*5850 *12,500	*5850 *12,500	*4350 *9,400	*4350 *9,400	*3750 *8,200	2950 6,300		*2250 *4,900	*2250 *4,900	6.90 22.60
1.5 m 5.0 ft			*8450 *18,150	7850 16,900	*5350 *11,500	4300 9,200	*4200 *9,050	2850 6,100		*2350 *5,100	2250 4,950	7.08 23.22
Ground Line			*6900 *15,950	*6900 *15,950	*6000 *13,000	4100 8,850	*4500 *9,750	2750 5,950		*2600 *5,650	2300 5,000	6.93 22.72
-1.5 m -5.0 ft	*4900 *10,900	*4900 *10,900	*9250 *20,000	7500 16,100	*6150 *13,300	4050 8,700	*4500 *9,650	2750 5,900		*3100 *6,800	2500 5,500	6.42 21.04
-3.0 m -10.0 ft	*8750 *19,750	*8750 *19,750	*8100 *17,450	7600 16,300	*5500 *11,850	4100 8,750				*4200 *9,250	3150 6,950	5.47 17.83

*Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

Reach Boom Lift Capacities



Load Point Height



Load at Maximum Reach



Load Radius Over Front



Load Radius Over Side

Boom – 4.65 m (15'3")

Counterweight – 2.2 mt (2.4 t)

Bucket – None

Stick – R2.5 (8'2")

Shoes – 600 mm (24") triple grouser – Blade Down

 6.0 m 20.0 ft kg lb	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		 m ft		
											m ft
					*3350 *7,450	*3350 *7,450			*2450 *5,400	*2450 *5,400	5.37 17.35
4.5 m 15.0 ft kg lb					*3550 *7,750	*3550 *7,750	*3550 *7,100	2900 6,200	*2250 *4,950	*2250 *4,950	6.37 20.77
3.0 m 10.0 ft kg lb			*5850 *12,500	*5850 *12,500	*4350 *9,400	*4350 *9,350	*3750 *8,200	2850 6,100	*2250 *4,900	*2250 *4,900	6.90 22.60
1.5 m 5.0 ft kg lb			*8450 *18,150	7550 16,150	*5350 *11,500	4100 8,850	*4200 *9,050	2750 5,900	*2350 *5,100	2150 4,750	7.08 23.22
Ground Line kg lb			*6900 *15,950	*6900 15,450	*6000 *13,000	3950 8,500	*4500 *9,750	2650 5,700	*2600 *5,650	2200 4,800	6.93 22.72
-1.5 m -5.0 ft kg lb	*4900 *10,900	*4900 *10,900	*9250 *20,000	7150 15,400	*6150 *13,300	3900 8,350	*4500 *9,650	2650 5,650	*3100 *6,800	2400 5,300	6.42 21.04
-3.0 m -10.0 ft kg lb	*8750 *19,750	*8750 *19,750	*8100 *17,450	7250 15,600	*5500 *11,850	3900 8,400			*4200 *9,250	3000 6,700	5.47 17.83

Boom – 4.65 m (15'3")

Counterweight – 2.2 mt (2.4 t)

Bucket – None

Stick – R3.0 (9'10")

Shoes – 500 mm (20") triple grouser – Blade Down

 7.5 m 25.0 ft kg lb	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft		 m ft		
													m ft
											*2550 *2550	*2550 *2550	4.37
6.0 m 20.0 ft kg lb											*2100 *4,650	*2100 *4,650	5.95 19.26
4.5 m 15.0 ft kg lb							*3150 *6,900	2850 6,050			*2000 *4,350	*2000 *4,350	6.86 22.39
3.0 m 10.0 ft kg lb					*3900 *8,400	*3900 *8,400	*3450 *7,550	2750 5,900			*2000 *4,350	*2000 *4,350	7.35 24.09
1.5 m 5.0 ft kg lb			*7600 *16,250	7350 15,800	*4950 *10,650	4000 8,550	*3950 *8,500	2650 5,650	*2150 1900		*2050 *4,550	1900 4,150	7.52 24.67
Ground Line kg lb			*7850 *18,150	6900 14,800	*5750 *12,500	3800 8,100	*4350 *9,400	2550 5,450			*2300 *5,000	1900 4,150	7.38 24.20
-1.5 m -5.0 ft kg lb	*4500 *10,050	*4500 *10,050	*9350 *20,250	6750 14,500	*6100 *13,200	3700 7,900	*4500 *9,700	2500 5,350			*2700 *5,900	2050 4,550	6.91 22.63
-3.0 m -10.0 ft kg lb	*7500 *16,850	*7500 *16,850	*8550 *18,500	6800 14,600	*5750 *12,450	3700 7,900	*3950 7,900	2500			*3600 *7,950	2500 5,500	6.04 19.69
-4.5 m -15.0 ft kg lb			*6450 *13,700	*6450 *13,700	*4050 8,400	3800					*4000 *8,800	3800 8,600	4.53 14.54

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Always refer to the appropriate Operation and Maintenance Manual for specific product information.

312E Hydraulic Excavator Specifications

Reach Boom Lift Capacities



Load Point Height



Load at Maximum Reach



Load Radius Over Front



Load Radius Over Side

Boom – 4.65 m (15'3")

Counterweight – 2.2 mt (2.4 t)

Bucket – None

Stick – R2.8 (9'2")

Shoes – 500 mm (20") triple grouser – Blade Down

 6.0 m 20.0 ft kg lb	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		 m ft			
										*2300 *5,100	*2300 *5,100	5.70 18.45
4.5 m 15.0 ft kg lb					*3250 *7,150	*3250 *7,150	*3300 *7,250	2800 6,000	*2150 *4,750	*2150 *4,750	6.65 21.70	
3.0 m 10.0 ft kg lb			*5250 *11,200	*5250 *11,200	*4050 *8,800	*4050 *8,800	*3600 *7,800	2750 5,900	*2150 *4,700	2100 4,550	7.16 23.45	
1.5 m 5.0 ft kg lb			*7950 *17,050	7300 15,650	*5100 *11,000	4000 8,550	*4050 *8,750	2650 5,650	*2250 *4,950	1950 4,300	7.33 24.04	
Ground Line kg lb			*7500 *17,350	6900 14,800	*5900 *12,700	3800 8,150	*4400 *9,550	2550 5,450	*2500 *5,450	2000 4,350	7.18 23.57	
-1.5 m -5.0 ft kg lb	*4700 *10,450	*4700 *10,450	*9350 *20,200	6800 14,600	*6150 *13,250	3700 7,950	*4500 *9,700	2500 5,350	*2950 *6,550	2150 4,750	6.70 21.95	
-3.0 m -10.0 ft kg lb	*8000 *18,000	*8000 *18,000	*8400 *18,150	6850 14,750	*5700 *12,250	3700 8,000			*4050 *9,000	2650 5,850	5.80 18.90	
-4.5 m -15.0 ft kg lb			*6050 *6050	*6050 *6050					*4100 *10,000	*4100 *10,000	4.18 12.52	

Boom – 4.65 m (15'3")

Counterweight – 2.2 mt (2.4 t)

Bucket – None

Stick – R2.5 (8'2")

Shoes – 500 mm (20") triple grouser – Blade Down

 6.0 m 20.0 ft kg lb	1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		 m ft		
					*3350 *7,450	*3350 *7,450			*2450 *5,400	*2450 *5,400	5.37 17.35
4.5 m 15.0 ft kg lb					*3550 *7,750	*3550 *7,750	*3550 *7,100	2800 6,000	*2250 *4,950	*2250 *4,950	6.37 20.77
3.0 m 10.0 ft kg lb			*5850 *12,500	*5850 *12,500	*4350 *9,400	4200 9,050	*3750 *8,200	2750 5,850	*2250 *4,900	2200 4,850	6.90 22.60
1.5 m 5.0 ft kg lb			*8450 *18,150	7200 15,500	*5350 *11,500	3950 8,550	*4200 *9,050	2650 5,650	*2350 *5,100	2100 4,550	7.08 23.22
Ground Line kg lb			*6900 *15,950	*6900 14,800	*6000 *13,000	3800 8,150	*4500 *9,750	2550 5,500	*2600 *5,650	2100 4,650	6.93 22.72
-1.5 m -5.0 ft kg lb	*4900 *10,900	*4900 *10,900	*9250 *20,000	6850 14,700	*6150 *13,300	3750 8,000	*4500 *9,650	2550 5,450	*3100 *6,800	2300 5,100	6.42 21.04
-3.0 m -10.0 ft kg lb	*8750 *19,750	*8750 *19,750	*8100 *17,450	6950 14,950	*5500 *11,850	3750 8,100			*4200 *9,250	2900 6,450	5.47 17.83

*Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

Work Tool Offering Guide*

Boom Type	Reach Boom			
	Stick Size	R3.0 (9'10")	R2.8 (9'2")	R2.5 (8'2")
Hydraulic Hammer	H110Es H115Es	H110Es H115Es	H110Es H115Es	H110Es H115Es
Mobile Scrap and Demolition Shear	S320B**	S320B**	S320B**	S320B**
Compactor (Vibratory Plate)	CVP75	CVP76	CVP75	CVP75
Contractors' Grapple	G112B	G112B	G112B	G112B
Trash Grapple				
Thumbs				
Center-Lock Pin Grabber Coupler				
Dedicated Quick Coupler				

These work tools are available for the 312E.
Consult your Cat dealer for proper match.

*Matches are dependent on excavator configurations. Consult your Cat dealer for proper work tool match.

**Boom mount.

312E Hydraulic Excavator Specifications

Bucket Specifications and Compatibility

	Width		Capacity		Weight		Fill	Reach Boom			
	mm	in	m ³	yd ³	kg	lb		%	R3.0 (9'10")	R2.8 (9'2")	R2.5 (8'2")
Without Quick Coupler											
General Duty (GD)	450	18	0.20	0.27	276	608	100%	●	●	●	●
	600	24	0.31	0.40	326	719	100%	●	●	●	●
	750	30	0.41	0.54	374	823	100%	●	●	●	●
	900	36	0.53	0.69	423	932	100%	●	●	●	●
	1050	42	0.65	0.84	469	1,034	100%	⊙	●	●	⊙
	1200	48	0.76	1.00	510	1,125	100%	X	X	X	X
Severe Duty (SD)	600	24	0.31	0.40	367	810	90%	●	●	●	●
	750	30	0.41	0.54	425	936	90%	●	●	●	●
	900	36	0.53	0.69	483	1,065	90%	●	●	●	●
	1050	42	0.65	0.84	529	1,166	90%	●	●	●	●
Maximum load pin-on (payload + bucket)							kg	1745	1835	1970	1695
							lb	3,846	4,044	4,342	3,736
With Center Lock Quick Coupler											
General Duty (GD)	450	18	0.20	0.27	276	608	100%	●	●	●	●
	600	24	0.31	0.40	326	719	100%	●	●	●	●
	750	30	0.41	0.54	374	823	100%	●	●	●	●
	900	36	0.53	0.69	423	932	100%	●	●	●	●
	1050	42	0.65	0.84	469	1,034	100%	⊙	●	●	⊙
	1200	48	0.76	1.00	510	1,125	100%	⊖	⊙	⊙	⊖
Severe Duty (SD)	600	24	0.31	0.40	367	810	90%	●	●	●	●
	750	30	0.41	0.54	425	936	90%	●	●	●	●
	900	36	0.53	0.69	483	1,065	90%	●	●	●	●
	1050	42	0.65	0.84	529	1,166	90%	●	●	●	●
Maximum load with coupler (payload + bucket)							kg	1499	1589	1724	1449
							lb	3,304	3,503	3,800	3,194

The above loads are in compliance with hydraulic excavator standard EN474, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity with front linkage fully extended at ground line with bucket curled.

Capacity based on ISO 7451.

Bucket weight with Long tips.

* Densities with 3.0 m (9'10") thumb stick do not consider thumb weight.

Maximum Material Density:

- 2100 kg/m³ (3,500 lb/yd³)
- ⊙ 1800 kg/m³ (3,000 lb/yd³)
- ⊖ 1500 kg/m³ (2,500 lb/yd³)
- X Not recommended

Caterpillar recommends using appropriate work tools to maximize the value customers receive from our products. Use of work tools, including buckets, which are outside of Caterpillar's recommendations or specifications for weight, dimensions, flows, pressures, etc. may result in less-than-optimal performance, including but not limited to reductions in production, stability, reliability, and component durability. Improper use of a work tool resulting in sweeping, prying, twisting and/or catching of heavy loads will reduce the life of the boom and stick.

Standard Equipment

Standard equipment may vary. Consult your Cat dealer for details.

• ENGINE

- C4.4 diesel engine
- Biodiesel capable
- Meets EPA Tier 4 Interim emission standards
- 2300 m (7,500 ft) altitude capability
- Electric priming pump
- Automatic engine speed control
- Economy and high power modes
- Two-speed travel
- Side-by-side cooling system
- Radial seal air filter
- Primary filter with water separator and water separator indicator
- Secondary filter
- Screen filter in fuel line
- Cold weather battery -25°C (-13°F)
- Jump start receptacle

• HYDRAULIC SYSTEM

- Regeneration circuit for boom and stick
- Reverse swing dampening valve
- Automatic swing parking brake
- High-performance hydraulic return filter
- Capability of installing HP stackable valve and medium and QC valve
- Capability of installing additional auxiliary pump and circuit
- Capability of installing boom lowering control device and stick lowering check valve
- Fine swing control

• CAB

- Pressurized operator station with positive filtration
- Sliding upper door window (left-hand cab door)
- Glass-breaking safety hammer
- Removable lower windshield with in cab storage bracket
- Coat hook
- Beverage holder
- Literature holder
- AM/FM radio
- Radio with MP3 auxiliary audio port
- Two 12V stereo speakers
- Storage shelf suitable for lunch or toolbox
- Color LCD display with indicators, filter/fluid change, and working hour information
- Adjustable armrest
- Height adjustable joystick consoles
- Neutral lever (lock out) for all controls
- Travel control pedals with removable hand levers
- Capability of installing two additional pedals
- Two power outlets, 10 amp (total)
- Travel alarm
- Laminated glass front upper window and tempered other windows
- Sunscreen

• UNDERCARRIAGE

- Grease Lubricated Track GLT2, resin seal
- Towing eye on base frame

• COUNTERWEIGHT

- 2.2 mt (2.4 t)

• ELECTRICAL

- 80 amp alternator
- Circuit breaker
- Capability to electrically connect a beacon

• LIGHTS

- Halogen boom light (left side)
- Time delay function for boom light and cab light
- Exterior lights integrated into storage box

• SECURITY

- Cat one key security system
- Door locks
- Cap locks on fuel and hydraulic tanks
- Lockable external tool/storage box
- Signaling/warning horn
- Secondary engine shutoff switch
- Openable skylight for emergency exit
- Rearview camera-ready

Optional Equipment

Optional equipment may vary. Consult your Cat dealer for details.

• ENGINE

- Quick drains, engine and hydraulic oil

• HYDRAULIC SYSTEM

- Control pattern quick-changer, two way
- Auxiliary hydraulics
- Boom and stick lines
- High-pressure line
- Medium-pressure line
- Cat quick coupler line – high-pressure capable
- Boom lowering and stick lowering control device
- Cat Bio hydraulic oil

• CAB

- Cab hatch emergency exit
- Seat, high-back air suspension with heater and cooling
- Seat, high-back air suspension with heater
- Seat, high-back mechanical suspension
- Windshield wiper, lower with washer
- Air pre-filter
- Left foot switch
- Left pedal
- Straight travel pedal
- Rain protector
- Cab mirror
- Ashtray

• UNDERCARRIAGE

- 500 mm (20") triple grouser shoes
- 600 mm (24") triple grouser shoes
- 700 mm (28") triple grouser shoes
- 770 mm (30") triple grouser shoes
- Rubber pad for 500 mm (20") triple grouser shoes
- Guard, heavy-duty bottom
- Center track guiding guard
- Segmented (2 piece) track guiding guard
- 2500 mm (8'2") blade with replaceable cutting edge
- 2600 mm (8'6") blade with replaceable cutting edge
- 2700 mm (8'10") blade with replaceable cutting edge
- Swivel guard

• FRONT LINKAGE

- Quick coupler
- Bucket linkage, without lifting eye
- 4.65 m (15'3") reach boom
- 2.5 m (8'2") stick
- 2.8 m (9'2") stick
- 3.0 m (9'10") stick
- 3.0 m (9'10") thumb-ready stick

• LIGHTS

- Working lights, cab mounted with time delay
- HID lights, cab mounted with time delay
- Halogen boom lights (right side)

• SECURITY

- FOGS, bolt-on
- Side steel bumper
- Guard rail
- Guard, cab front, mesh
- Guard, vandalism
- Rearview camera

• TECHNOLOGY

- Cat Grade Control Depth and Slope
- Product Link

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com

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